Indiana Department of Education

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3-5 Mathematics Resources to Extend and Enrich the Core Curriculum Appropriate for High Ability Students
Indiana Academic Standard Strand:
Algebraic Thinking

Resource	Annotation	Differentiation Tip(s)	Correlating Indiana Academic Strand Standards	Correlating Indiana Academic Process Standards
Borenson, H. ***The Hands-On Equations Learning System.*** www.borenson.com	*Hands On Equations* is a supplementary program that provides students with a concrete foundation for algebra. Demonstration videos can be found at www.borenson.com. The program includes three levels and covers the following ideas: • the concept of a balanced equation • the notion of the "check" of an equation • the concept of a variable • essential properties of	***Self-Pacing:*** Students can work through the lessons in each level at their own pace, stopping when necessary for instruction from the teacher. Instruction can be pre-recorded for an enhanced self-pacing experience.	3.AT.1; 3.AT.2; 3.AT.3; 3.AT.4; 3.AT.5 4.AT.1; 4.AT.2; 4.AT.3; 4.AT.4; 4.AT.6 5.AT.8	PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8

	equations such as the addition, subtraction, and division properties of equality – although these terms are never used • essential concepts related to zero, such as the ideas of additive inverse and additive identity • the addition and subtraction of opposite variables, as well as the addition and subtraction of positive and negative integers			
DynaMath. dynamath.scholastic.com	*DynaMath* is a monthly magazine that provides upper-elementary students with challenging and engaging real-world math applications to extend and enrich the core curriculum.	***Flexible Grouping:*** Assign like-ability partners or small groups to collaboratively explore and work through the magazine activities.	* varies with monthly issues	* varies with monthly issues
VandeCreek, B. (2000) ***Math Rules! 3rd-4th.*** Marion, IL: Pieces of Learning. www.piecesoflearning.com	This reproducible resource provides a year's worth of weekly 8-problem enrichment challenge worksheets for both third and	***Tiered delivery:*** Match the grade level resource most appropriate to the readiness level of students. This resource is	3.AT.1; 3.AT.2; 3.AT.3; 3.AT.4;	PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8

(ISBN: 978-1-880505-80-9) *Also found in:* • *Geometry* • *Measurement* • *Data Analysis/Data Analysis and Statistics* • *Number Sense* • *Computation*	fourth grade. The variety of problems covers standards from all content strands. These worksheets are ideal for homework use.	available for grades 1-6.	3.AT.5; 3.AT.6 4.AT.1; 4.AT.2; 4.AT.3; 4.AT.4; 4.AT.5	
VandeCreek, B. (2000) ***Math Rules! 5th-6th.*** Marion, IL: Pieces of Learning. www.piecesoflearning.com (ISBN: 978-1-880505-81-6) *Also found in:* • *Geometry* • *Measurement* • *Data Analysis/Data Analysis and Statistics* • *Number Sense* • *Computation*	This reproducible resource provides a year's worth of weekly 8-problem enrichment challenge worksheets for both fifth and sixth grade. The variety of problems covers standards from all content strands. These worksheets are ideal for homework use.	***Tiered delivery:*** Match the grade level resource most appropriate to the readiness level of students. This resource is available for grades 1-6.	4.AT.1; 4.AT.2; 4.AT.3; 4.AT.4; 4.AT.5; 4.AT.6 5.AT.1; 5.AT.2; 5.AT.3; 5.AT.4; 5.AT.5; 5.AT.6; 5.AT.7; 5.AT.8	PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8
Zaccaro, E. (2014) ***Upper***				

Elementary Challenge Math. Bellevue, IA: Hickory Grove Press. www.challengemath.com (ISBN: 978-0-9854725-2-8) *Also found in:* • *Measurement* • *Number Sense* • *Computation*	In this resource, "problem sets" follow an introduction meant for instruction. Each "problem set" presents a single problem type in increasingly complex steps. "Problem sets" are followed by a page of problem challenges on the same topic at the following four challenge levels: • Level 1 (Easy) • Level 2 (Somewhat Challenging) • Level 3 (Challenging) • Genius Level (Very Challenging) Topics covered include: astronomy, problem solving, decimals, money, fractions, percents, metric system, algebra, probability, ratios, perimeter and circumference, areas, volumes, and bases.	***Tiered Delivery:*** Following the whole-class introduction to a specific type of problem, students can complete the appropriately leveled follow-up challenges independently or with a like-ability partner, choosing from one of the four difficulty levels.	3.AT.1; 3.AT.2; 3.AT.3; 3.AT.4; 3.AT.5; 3.AT.6 4.AT.1; 4.AT.2; 4.AT.3; 4.AT.4; 4.AT.5; 4.AT.6 5.AT.1; 5.AT.2; 5.AT.3; 5.AT.4; 5.AT.5; 5.AT.8	PS.1; PS.2; PS.3; PS.4; PS.5; PS.6; PS.7; PS.8